

some in Missouri and was mostly in satisfactory condition, while favorable reports were received generally from the Great Plains States. Fall-seeded grains needed more moisture, however, in the Plateau districts of the West, but rainfall was beneficial in central and north Pacific States.

It was mostly unfavorable for seeding spring oats, especially the latter part of the month, where this work is usually in progress during February. Some oats had been sown at the close, however, northward to south-central Kansas, and seeding made fairly good progress in the extreme lower Great Plains. Some rice land was prepared in California and Louisiana.

The month was generally favorable for livestock interests in the great western grazing districts, although the cold, stormy conditions early in the month in the central Great Plains were hard on stock, especially in Kansas and Nebraska, while pastures continued short in Oklahoma. The range remained in good condition in Texas,

except locally in the western portion where it was too dry, and there was sufficient precipitation in much of the far Southwest to benefit range land. More moisture was needed, however, in the western Plateau districts, particularly in Utah and Nevada, while dry weather unfavorably affected pastures in southern California. Lambing made satisfactory progress the latter part of the month in southwestern districts, and shed lambing showed good results in the far Northwest.

The month, on the whole, was favorable for fruit. There was some complaint of injury to peach buds by cold weather in Missouri, and some buds were killed in Georgia, but on the whole frost damage during the month was not extensive. Early fruits were blooming in the east Gulf sections and parts of the Pacific coast, while the warm weather the last part of the month caused trees to blossom prematurely in Arizona. There was some damage by frost to berries in Florida, but citrus generally continued in good condition.

### CLIMATOLOGICAL TABLES CONDENSED CLIMATOLOGICAL SUMMARY

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

*Condensed climatological summary of temperature and precipitation by sections, February, 1924*

Section	Temperature								Precipitation									
	Section average	Departure from the normal	Monthly extremes				Section average	Departure from the normal	Greatest monthly				Section average	Departure from the normal	Least monthly			
			Station	Highest	Date	Station			Station	In.	In.	Amount			Station	In.	Amount	
Alabama.....	47.0	-0.8	Selma.....	81	15	Valley Head.....	12	6	Leeds.....	4.65	-0.67	7.34	Union Springs.....	1.43	Ajo.....	0.69	0.00	
Alaska.....									St. Johns.....	2.26	-1.17	2.26	Fayetteville.....	0.60	Fayetteville.....	6.36	0.60	
Arizona.....	48.7	+2.5	Continental.....	92	7	Springerville.....	3	13	Portland.....	1.02	-1.02	10.22	29 stations.....	0.00	Portland.....	2.26	0.60	
Arkansas.....	42.9	+0.7	Subiaco.....	83	14	Gravette.....	-7	6	Instkip.....	7.50	-2.50	7 stations.....	7 stations.....	T	Instkip.....	1.76	0.30	
California.....	53.3	+4.8	2 stations.....	91	13	Heim Creek.....	-9	11	Savage Basin.....	0.51	-0.58	2.41	Sand Key.....	0.38	Savage Basin.....	3.51	0.38	
Colorado.....	31.4	+4.6	Lamar.....	80	14	Dillon.....	-30	24	Arcadia.....	3.30	+0.17	6.86	Brunswick.....	1.88	Dillon.....	2.51	0.38	
Florida.....	58.0	-2.6	Gainesville.....	88	19	4 stations.....	24	10	Clayton.....	3.96	-1.01	7.85	Clayton.....	1.22	Gainesville.....	3.30	0.38	
Georgia.....	46.7	-1.2	Valdosta.....	84	25	Clayton.....	10	22										
Hawaii.....																		
Idaho.....	35.5	+7.3	stations.....	67	14	Warren.....	-9	9	Warren.....	1.55	-0.10	5.63	Deer Flat.....	0.62	Mount Vernon.....	2.37	0.66	
Illinois.....	30.5	+2.8	Harrisburg.....	70	3	Mount Carroll.....	-6	22	Fairfield.....	1.56	-0.52	3.52	Ogallala.....	0.63	Ogallala.....	2.39	0.63	
Indiana.....	30.1	+0.9	Rome.....	70	3	Goshen.....	-6	23	Valparaiso.....	1.62	-1.03	4.00	Algona.....	0.30	Algona.....	2.32	0.30	
Iowa.....	25.8	+5.3	Clarinda.....	70	2	Decorah.....	-15	22	Lacona.....	1.27	+0.12	3.55	Minneapolis.....	0.10	Minneapolis.....	2.56	0.10	
Kansas.....	35.7	+3.4	2 stations.....	81	14	2 stations.....	-10	21	Walnut.....	0.82	-0.30	5.10	Louisville.....	1.45	Walnut.....	2.56	1.45	
Kentucky.....	36.0	0.0	do.....	71	13	Farmers.....	9	22	Middlesboro.....	2.56	-0.97	7.67	St. Francisville.....	2.06	Middlesboro.....	4.94	2.06	
Louisiana.....	52.5	-0.5	Newellton.....	81	16	Robelline.....	12	6	Franklin.....	4.94	+0.37	2.48	Public Landing, Md.....	2.09	Franklin.....	5.63	0.62	
Maryland-Delaware.....	32.4	0.0	Princess Anne, Md.....	68	5	Grantsville, Md.....	-13	24	Millington, Md.....	3.47	+0.40	3.10	Eagle Harbor.....	0.53	Grantsville, Md.....	2.37	0.66	
Michigan.....	19.8	+1.7	2 stations.....	52	26	Humboldt.....	-35	23	Traverse City.....	1.79	+0.10	1.80	Bethlehem, N. H.....	0.90	Humboldt.....	2.39	0.63	
Minnesota.....	18.8	+8.1	Pipestone.....	66	28	2 stations.....	-20	22	Grand Marais.....	0.52	-0.26	7.49	Hernando.....	1.53	Pipestone.....	1.80	0.44	
Mississippi.....	48.3	-0.3	Macon.....	83	15	Holly Springs.....	18	6	Hickory.....	4.51	-0.43	3.00	Seymour.....	0.60	Macon.....	4.35	0.60	
Missouri.....	33.8	+2.0	Hollister.....	70	14	3 stations.....	-5	6	Lamart.....	1.88	-0.27	3.82	Sunset Orchard.....	T	Hollister.....	2.51	0.60	
Montana.....	31.5	+10.0	Chinook.....	67	6	Browning.....	-27	20	Herion.....	0.84	+0.06	2.70	Hebron.....	T	Chinook.....	4.94	0.60	
Nebraska.....	30.7	+5.8	North Loup.....	72	2	2 stations.....	-15	8	Ainsworth.....	0.84	+0.10	6 stations.....	Bethlehem, N. H.....	0.90	North Loup.....	4.35	0.60	
Nevada.....	41.5	+6.8	Las Vegas.....	84	17	do.....	2	1	Owyhee.....	0.55	-0.37	1.96	Newton.....	2.45	Las Vegas.....	4.45	0.60	
New England.....	18.3	-3.8	Turners Falls, Mass.....	54	27	Van Buren, Me.....	-28	9	Bristol, R. I.....	2.38	-0.83	6.11	Newton.....	2.45	Turners Falls, Mass.....	4.45	0.60	
New Jersey.....	28.8	-1.0	Bridgeport.....	62	4	Layton.....	-3	25	Indian Mills.....	4.10	+0.40	2 stations.....	Silver Lake.....	0.00	Bridgeport.....	4.11	0.60	
New Mexico.....	38.8	+1.4	Boaz.....	85	10	Harvey's Upper Ranch.....	-13	4	Lee's Ranch.....	0.41	-0.33		Erie.....	1.27	Boaz.....	5.16	0.60	
New York.....	18.8	-2.8	2 stations.....	53	4	Wanakena.....	-26	18	Flushing.....	2.66	-0.17	4.92	Lauterbrunnen.....	0.64	Wanakena.....	4.35	0.64	
North Carolina.....	39.9	-1.8	do.....	76	5	Banners Elk.....	2	9	Edenton.....	4.35	+0.28	7.35	Cullowhee.....	2.01	Banners Elk.....	3.52	0.64	
North Dakota.....	20.3	+12.4	Berthold Agency.....	67	11	2 stations.....	-27	21	Foxholm.....	0.41	-0.08	1.01	2 stations.....	T	Berthold Agency.....	2.37	0.64	
Ohio.....	28.7	+0.1	Clarington.....	75	4	Canfield.....	-8	24	Middleport.....	2.02	-0.47	4.18	Defiance.....	0.9	Clarington.....	2.39	0.64	
Oklahoma.....	42.2	+2.8	Altus.....	88	15	Spavinaw.....	-5	6	McAlester.....	0.93	-0.48	3.55	Buffalo.....	T	Altus.....	3.55	0.64	
Oregon.....	43.0	+5.9	Riddle.....	74	13	Crater Lake.....	1	9	Astoria.....	3.05	-0.52	11.52	Silver Lake.....	0.05	Riddle.....	2.56	0.64	
Pennsylvania.....	26.9	-0.4	Uniontown.....	70	4	West Bingham.....	-25	24	Pottsville.....	2.94	+0.11	5.16	Erie.....	1.27	Uniontown.....	4.35	0.64	
Porto Rico.....																		
South Carolina.....	44.2	-2.8	Yemassee.....	78	18	2 stations.....	13	9	Walthalla.....	3.54	-0.85	6.32	Garnett.....	1.41	Yemassee.....	4.35	0.64	
South Dakota.....	25.4	+8.1	Tyndall.....	68	2	La Delle.....	-23	21	Spearsfish.....	0.93	+0.37	3.57	Victor.....	0.13	Tyndall.....	2.39	0.64	
Tennessee.....	39.3	-1.0	3 stations.....	76	13	2 stations.....	6	17	Clinton.....	3.99	-0.10	5.83	Paris.....	1.44	3 stations.....	4.45	0.64	
Texas.....	49.8	-0.5	San Benito.....	95	4	Clint.....	-8	5	Freeport.....	2.49	+0.89	8.31	Childress.....	0.00	San Benito.....	4.45	0.64	
Utah.....	35.9	+6.0	St. George.....	75	12	Panguitch.....	-7	1	High Line City Creek.....	0.28	-1.00	1.74	12 stations.....	0.00	St. George.....	2.56	0.64	
Virginia.....	35.5	-1.1	Runnymede.....	72	5	Burke Garden.....	2	9	Runnymede.....	2.67	-0.47	4.27	Winchester.....	0.82	Runnymede.....	3.52	0.64	
Washington.....	44.1	+7.4	Hammond.....	71	12	Snyder's Ranch.....	-1	9	Forks.....	4.42	+0.91	23.98	Attalia.....	0.27	Hammond.....	4.42	0.64	
West Virginia.....	31.6	-0.4	Janeslew.....	74	4	Cheat Bridge.....	-16	16	Pickens.....	3.21	+0.15	8.18	Upper Tract.....	0.84	Janeslew.....	3.21	0.64	
Wisconsin.....	20.3	+4.8	3 stations.....	50	26	Long Lake.....	-31	23	Manitowoc.....	1.09	-0.03	2.78	Iron River.....	0.22	3 stations.....	2.78	0.64	
Wyoming.....	27.6	+5.8	Pinebluff.....	68	14	Moran.....	-27	24	Dome Lake.....	0.73	-0.04	3.08	Powell.....	0.04	Pinebluff.....	3.08	0.64	

<sup>1</sup> For description of tables and charts, see REVIEW, January, 1924, pp. 56-57.

<sup>2</sup> Other dates also.

## MONTHLY WEATHER REVIEW

FEBRUARY, 1924

TABLE 1.—Climatological data for Weather Bureau stations, February, 1924

Districts and stations	Elevation of instruments		Pressure				Temperature of the air						Precipitation				Wind				Snow, sleet, and ice on ground at end of month													
	Baometer above sea level	Thermometer above ground	Ft.	Ft.	In.	In.	Station, reduced to mean of 24 hours	Sea level, reduced to mean of 24 hours	Departure from normal	°F.	°F.	°F.	Mean maximum + mean minimum + 2°	Mean maximum	Mean minimum	Greatest daily range	Mean relative humidity	Total	In.	In.	Miles	Total movement	Precipitation direction	Maximum velocity	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	In.	In.			
										21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	
New England																																		
Eastport	76	67	85	29.89	29.98	.00	17.8	-3.7	37	27	25	-0	19	10	23	15	8	64	1,07	-2.7	5	9,062	nw.	58	c.	20	11	8	10	5.3	8.1	5.6		
Greenville, Me.	1,070	6	80	28.80	30.04		10.0		40	27	20	-10	10	0	40		70	3,54	+0.1	6,281	nw.	37	e.	30	18	4	7	4.0	22.5	27.5				
Portland, Me.	103	82	117	29.92	30.05	+ .03	19.8	-4.0	39	28	27	-2	24	12	26	16	11	70	1,57	-1.8	3,691	nw.	16	19	23	8	3	7	16.0	11.8				
Concord	288	70	79	29.73	30.06	+ .02	18.3	-4.0	44	27	28	-6	10	9	37		8	5	86	2,19	-0.2	10	4,178	w.	28	sw.	21	8	8	13	6.2	27.5	15.9	
Burlington	404	11	48	29.84	30.12	+ .09	12.0	-5.9	34	27	21	-10	9	3	30		8	5	86	1,59	+0.2	5,781	n.	35	s.	20	9	7	13	6.2	20.8	11.7		
Northfield	876	12	60	29.09	30.09	+ .05	10.5	-6.7	39	27	23	-20	9	24	26	20	15	70	1,52	-1.0	7,458	w.	34	e.	20	15	6	8	4.4	10.4	1.0			
Boston	125	115	188	29.89	30.03	- .01	26.6	-2.2	44	28	33	10	24	20	23	22	15	61	1,92	-1.3	10,584	nw.	59	se.	20	10	6	13	5.7	3.6	0.0			
Nantucket	12	14	90	29.95	30.00	- .04	29.8	-2.8	46	6	35	15	24	20	27	24	21	73	2,57	-1.8	14,642	nw.	60	e.	20	13	6	10	5.0	3.0	0.0			
Block Island	26	11	46	29.98	30.01	- .05	28.0	-2.4	47	20	33	14	24	23	22	21	16	69	3,67	-0.9	8,573	nw.	38	w.	21	15	4	10	4.5	7.4	T.			
Providence	160	215	251	29.89	30.04	- .01	25.5	-3.5	42	32	32	6	13	18	24		70	2,98	-0.7	8	14	7	8	4.1	2.7	3.0								
Hartford	159	122	140	29.87	30.05	- .01	24.9	-2.8	44	3	32	6	13	18	24		70	3,18	-0.7	9	6,562	ne.	33	nw.	16	16	4	9	4.4	9.8	0.5			
New Haven	106	74	153	29.94	30.06	- .01	26.2	-2.8	44	3	33	8	13	20	22	22	17	70	3,18	-0.7	9	6,562	ne.	33	nw.	16	16	4	9	4.4	9.8	0.5		
Middle Atlantic States							31.5	-1.8									71	3,16	-0.2												5.8			
Albany	97	102	115	29.99	30.10	+ .03	19.0	-5.1	39	27	27	-10	13	11	32	17	13	80	1,59	-1.0	10	5,045	ne.	26	s.	10	13	5	11	5.1	11.3	1.0		
Binghamton	871	10	84	29.84	30.05	- .03	21.3	-3.4	41	4	29	10	24	23	26	20	69	3,84	+0.6	11,438	nw.	28	se.	20	7	6	16	7.2	22.4	4.5				
New York	314	414	454	29.71	30.07	- .01	29.2	-2.1	46	3	36	9	13	23	21	26	20	69	4,11	+1.3	10,242	nw.	55	nw.	21	9	7	13	10.7	10.7	T.			
Harrisburg	374	94	104	29.83	30.10	+ .01	29.8	-0.4	46	2	36	12	24	24	21	26	20	69	4,57	+1.1	10,765	n.	19	nw.	10	5	9	15	6.3	15.8	2.0			
Philadelphia	114	123	190	29.96	30.09	- .01	32.5	-1.4	44	3	39	15	24	26	20	21	15	75	4,54	+0.5	18,570	ne.	34	e.	5	10	7	12	5.7	10.3	T.			
Reading	325	81	98	29.72	30.09	- .01	30.0		46	3	36	12	24	24	18	27	23	77	4,20	+0.6	8,482	nw.	38	e.	20	12	5	12	5.2	14.1	0.4			
Scranton	805	111	119	29.18	30.08	- .00	25.7	-1.2	46	4	33	6	13	17	19	29	25	76	4,05	+0.7	9,12,745	nw.	30	se.	20	13	6	10	5.1	12.8	0.0			
Atlantic City	52	37	172	30.01	30.07	- .04	32.7	-0.9	53	5	58	15	13	17	19	26	20	70	4,41	+0.5	11,12,599	n.	56	ne.	5	11	6	12	5.5	8.8	T.			
Cape May	17	13	49	30.09	30.11	- .00	33.6	-0.5	52	5	59	14	24	26	21	26	20	70	4,41	+0.1	12,8,739	nw.	44	e.	5	11	5	13	5.9	15.6	0.0			
Sandy Hook	22	10	50	30.04	30.06	- .00	29.6		45	20	34	12	13	15	15	26	20	70	4,41	+0.5	11,12,599	n.	56	ne.	5	11	6	12	5.5	8.8	T.			
Trenton	190	159	183	29.86	30.07	- .00	29.6		50	2	36	9	14	23	24	26	20	68	3,44	+0.1	12,8,739	nw.	44	e.	5	11	5	13	5.9	15.6	0.0			
Baltimore	123	100	113	29.95	30.08	- .03	34.6	-0.8	56	4	40	21	29	20	30	24	17	67	4,14	+0.5	12,8,594	w.	24	ne.	20	8	10	11	6.0	4.9	0.0			
Washington	112	62	85	29.97	30.10	- .01	34.2	-1.1	59	4	40	17	24	28	22	29	23	66	3,05	-0.5	8,5,712	nw.	33	nw.	15	8	10	11	7.1	4.8	0.0			
Cape Henry	18	8	34	30.04	30.06	- .00	39.0		64	5	45	24	23	34	31	36	31	75	3,64	-0.2	10,11,168	n.	62	n.	15	12	10	11	8.5	1.3	0.0			
Lynchburg	681	153	188	29.32	30.04	- .02	37.8	-2.5	46	4	46	22	23	30	34	31	24	63	1,87	-1.8	10,11,175	n.	36	nw.	27	11	12	6	4.7	3.0	0.0			
Norfolk	91	170	205	29.88	30.03	- .02	40.5	-2.2	58	4	48	25	16	33	25	35	28	66	3,15	-0.7	8,10,162	n.	44	ne.	27	12	13	11	6.2	3.0	0.0			
Richmond	144	111	152	29.94	30.10	- .01	38.2	-1.4	58	5	47	20	16	30	30	31	24	64	2,34	-0.9	8,6,307	n.	31	nw.	20	12	8	9	5.3	T.	0.0			
Wytheville	2,304	49	55	27.64	30.11	- .01	32.2	-2.9	60	4	39	14	9	26	28	28	24	77	2,00	-2.2	11,5,652	w.	30	sw.	11	6	7	16	7.0	7.6	T.			
South Atlantic States							44.5	-3.4									71	3,19	-0.8												4.9			
Asheville	2,255	70	84	27.69	30.13	- .00	35.8	-2.7	62	3	43	16	22	28	31	26	72	2,79	-0.5	11,7,557	nw.	31	n.	14	9	9	11	5.6	8.0	T.				
Charlotte	779	55	62	29.23	30.09	- .03	40.6	-3.3	66	3	49	21	9	32	29	34	29	68	4,18	-0.3	11,4,430	n.	24	w.	10	9	9	11	5.6	2.4	0.0			
Hatteras	11	11	50	30.04	30.05	- .06	44.3	-3.1	64	5	51	28	10	39	33	40	37	76	6,15	+1.5	11,12,190	nw.	56	nw.	27	12	10	7	4.8	0.0	0.0			
Manteo	12	5	42				41.6		66	4	21	10	32	32	35	29	68	4,95	+0.5	8,5,513	n.	32	nw.	10	9	10	10	5.2	2.4	0.0				
Raleigh	376	103	110	29.68	30.10	- .01	40.6	-2.6	66	3	49	23	23	23	25	35	29	68	4,95	+0.5	8,5,544	w.	33	s.	20	15	7	12	4.7	0.0	0.0			
Wilmington	78	81	91	30.00	30.10	- .02	46.1	-1.8	68	4	55	25	29	37	28	40	36	74	2,61	-0.9	8,4,842	w.	38	ne.	26	13	5	11	4.7	0.0	0.0			
Charleston	48	11	92	30.04	30.09	- .03	44.5	-2.9	73	18	57	29	9	42	25	33	37	70	1,57	-1.9														

TABLE 1.—Climatological data for Weather Bureau stations, February, 1924—Continued

Districts and stations	Elevation of instruments			Pressure			Temperature of the air						Precipitation			Wind			Snow, sleet, and ice on ground at end of month													
	Barometer above sea level	Thermometer above ground	Aneroid above ground	Station, reduced to mean of 24 hours	Sea level, reduced to mean of 24 hours	Departure from normal	Mean max. + mean min. + 2	Mean maximum	Departure from normal	Maximum	Date	Mean maximum	Minimum	Date	Mean minimum	Departure from normal	Mean relative humidity (reatest daily range)	Total	In.	Miles	Total movement	Precipitation direction	Maximum velocity	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall				
	Ft.	Ft.	Ft.	In.	In.	In.	° F.	° F.	In.	° F.		° F.	° F.		° F.	%	In.	In.	Miles			Date	0-10	In.	In.							
<b>Ohio Valley and Tennessee</b>							<b>34.4</b>	<b>-1.6</b>									<b>74</b>	<b>2.62</b>	<b>-1.1</b>							<b>7.2</b>						
Chattanooga	762	189	213	29.29	30.13	-.00	41.5	-2.6	71	15	49	20	22	34	35	28	63	4.02	-1.1	12	5,902	w.	29	se.	4	10	5	14	6.0	T.	0.0	
Knoxville	996	102	111	29.02	30.10	-.02	40.2	-1.7	66	3	47	21	9	33	32	35	74	4.66	-0.4	12	4,677	ne.	5	sw.	5	4	4	21	5.2	T.	2.0	
Memphis	390	76	97	29.69	30.13	+.02	42.8	-1.5	74	15	50	20	6	36	32	38	69	2.52	-2.0	9	5,039	n.	41	sw.	4	13	5	11	5.1	T.	0.0	
Nashville	546	168	191	29.54	30.14	+.02	38.8	-2.8	68	3	46	18	7	31	33	34	39	3.44	-1.0	11	6,553	nw.	40	se.	4	8	5	16	5.6	T.	1.5	
Lexington	889	193	230	29.02	30.13	+.02	33.4	-2.0	65	3	40	14	7	27	24	26	71	2.60	-0.7	10	10,129	sw.	38	sw.	5	3	6	20	7.8	T.	0.0	
Louisville	525	219	255	29.54	30.14	+.03	34.4	-2.8	67	3	41	14	7	28	26	28	68	1.46	-2.4	8	5,570	ne.	39	sw.	4	4	9	16	7.2	T.	1.5	
Evansville	431	139	175	28.66	30.14	+.03	35.6	-0.7	60	3	42	15	7	26	25	26	72	1.55	-1.6	9	5,569	nw.	32	sw.	5	9	1	13	6.8	T.	2.0	
Indianapolis	822	194	230	29.20	30.12	+.02	30.5	-0.6	60	3	37	13	22	24	24	28	80	1.44	-1.8	11	9,290	w.	38	dw.	10	3	8	18	7.4	T.	2.6	
Royal Center	736	11	55	29.29	30.13		26.6		50	3	33	4	22	20	29	31	36	8	0.25		31	dw.	9	6	4	19	7.5	T.	3.6			
Terre Haute	575	96	128	29.49	30.13		31.8		52	3	38	11	22	25	24	28	77	1.89		10	7,583	nw.	35	sw.	10	3	11	15	7.1	T.	2.9	
Cincinnati	626	11	51	29.42	30.12	+.02	31.6	-1.2	61	3	39	15	22	25	26	25	78	1.70	-1.6	12	6,516	sw.	39	sw.	9	6	2	21	7.6	T.	2.9	
Columbus	824	179	222	29.20	30.11	+.02	30.2	-0.5	60	4	36	15	16	24	23	26	75	1.73	-1.4	14	8,326	w.	39	nw.	10	3	8	21	5.2	T.	0.0	
Dayton	899	137	173	29.20	30.11		30.4	+0.4	59	3	36	14	22	24	26	27	75	1.79	-1.4	14	7,983	ne.	36	dw.	10	3	8	18	7.4	T.	2.6	
Elkins	1,947	59	67	27.97	30.12	+.02	29.6	-2.0	66	4	34	13	21	24	21	26	82	1.47	+0.8	10	4,244	w.	28	w.	10	0	9	20	6.3	T.	1.5	
Parkersburg	638	77	84	29.44	30.12	+.02	33.4	-0.8	68	4	40	15	16	27	27	29	80	3.07	-0.3	11	4,366	sw.	30	dw.	10	4	6	19	7.7	T.	2.0	
Pittsburgh	842	353	410	29.16	30.10	+.01	29.3	-3.0	66	4	36	10	16	23	26	25	73	2.50	-0.2	13	8,090	w.	42	nw.	10	4	7	18	7.3	T.	1.6	
<b>Lower Lake Region</b>				<b>22.1</b>	<b>-2.9</b>											<b>80</b>	<b>2.11</b>	<b>-0.4</b>								<b>6.9</b>						
Buffalo	767	247	280	29.23	30.10	+.04	21.4	-2.9	39	5	27	1	24	15	22	19	16	79	2.65	-0.3	19	12,829	w.	64	sw.	20	5	7	17	7.4	T.	22.0
Canton	448	10	61	29.58	30.10		10.0	-8.0	35	27	19	-19	19	1	29	19	16	70	2.02	-0.6	10	7,538	w.	44	e.	5	13	7	9	4.6	T.	20.5
Oswego	335	76	91	30.09	30.13	+.03	19.2	-4.7	34	2	26	-17	17	13	27	17	77	1.79	-0.9	12	8,066	s.	37	nw.	10	6	3	20	7.7	T.	17.7	
Rochester	523	86	102	29.51	30.10	+.04	21.0	-3.6	38	6	27	0	24	15	28	19	15	77	3.07	+0.2	6	1,659	w.	34	w.	21	6	2	21	7.5	T.	29.4
Syracuse	597	97	113	29.42	30.09	+.03	19.3	-4.5	35	2	26	3	19	13	25	25	75	1.75	+0.9	16	7,483	s.	42	w.	10	6	5	18	7.2	T.	21.0	
Erie	714	130	166	29.30	30.09	+.02	23.4	-3.5	42	1	30	24	27	23	29	29	80	1.61	-1.7	9	1,136	sw.	22	se.	20	6	5	18	7.2	T.	10.3	
Cleveland	762	190	201	29.25	30.10	+.03	25.4	-2.0	48	5	30	8	24	20	29	24	81	1.50	-1.2	14	8,598	dc.	42	nw.	10	3	9	17	7.8	T.	7.8	
Sandusky	629	70	72	29.40	30.11	+.04	26.1	-1.3	41	5	31	10	24	22	29	23	82	1.67	-0.8	14	8,125	w.	43	dw.	10	2	10	17	7.5	T.	10.0	
Toledo	628	208	243	29.41	30.12	+.05	25.8	-1.5	43	27	31	9	24	20	22	23	79	2.28	+0.2	13	10,555	sw.	45	w.	10	7	8	14	6.6	T.	13.9	
Fort Wayne	856	113	124	29.16	30.12		26.2	+0.4	47	1	32	6	22	20	22	24	80	1.23		10	7,164	e.	31	dw.	9	8	5	16	6.7	T.	8.7	
Detroit	730	218	258	29.29	30.12	+.06	25.5	+0.2	45	27	31	9	24	20	24	24	78	2.06	-0.2	8	8,111	e.	38	e.	19	8	7	14	6.4	T.	13.5	
<b>Upper Lake Region</b>				<b>20.7</b>	<b>+1.6</b>											<b>84</b>	<b>1.60</b>	<b>-0.2</b>								<b>6.8</b>						
Alpena	609	13	92	29.44	30.14	+.11	16.4	-1.6	36	1	25	-12	24	7	39	16	12	82	1.62	-0.2	13	8,492	nw.	46	ne.	5	3	11	13	6.6	T.	18.8
Escanaba	612	54	60	29.47	30.17	+.11	17.6	+2.2	37	10	26	-2	13	10	30	16	14	85	1.09	-0.3	6	8,876	n.	32	ne.	5	7	5	17	6.8	T.	10.6
Grand Haven	632	54	89	29.41	30.13	+.08	23.3	-0.9	33	27	30	-2	23	17	27	21	77	1.29	+0.2	11	8,006	s.	43	w.	9	7	10	17	5.7	T.	15.5	
Grand Rapids	707	70	87	29.74	30.14	+.09	24.0	-1.5	41	4	37	1	24	17	23	21	81	3.07	+0.2	12	6,159	w.	34	w.	4	3	10	16	7.2	T.	9.0	
Houghton	668	62	99	29.42	30.19	+.13	18.4	-4.7	43	26	21	26	31	23	11	35	10	61	0.61	-1.2	11	7,049	e.	39	nw.	9	4	8	17	7.7	T.	12.6
Lansing	878	11	62	29.30	30.11		22.1	+0.5	43	1	30	-8	24	14	36	19	78	2.13	0.0	21	4,340	ne.	21	sw.	10	8	8	13	6.4	T.	15.6	
Ludington	637	60	29.41	30.14		22.2		36	1	29	-5	24	16	20	21	18	85	2.46		10	7,202	e.	35	sw.	9	7	5	17	6.6	T.	24.2	
Marquette	734	77	111	29.36	30.20	+.15	21.0	+5.1	52	26	27	4	24	15	25	24	84	2.18	+0.4	8	7,189	nw.	27	dw.	10	5	15	21	8.0	T.	15.5	
Port Huron	638	70	120	29.38	30.10	+.05	21.8	-0.9	49	27	28	-3	24	15	28	21	86	1.62	-0.6	12	7,611	nw.	36	dw.	10	5	15	20	5.4	T.	20.5	
Saginaw	641	69	77	29.40	30.13		20.4		37	3	27	-9	24	13	28	19	86	1.27	-0.6	11	5,879	nw.	31	ne.	5	7	6	17	7.7	T.	7.9	
Sault Sainte Marie	614	11	52	29.60	30.18	+.15	28.8	+1.4	44	27	31	3	20	24	28	22	74	1.68	-0.6	7	5,418	se.	34	dw.	10	6	10	13	6.6	T.	20.0	
Chicago	823	140	310	29.22	30.14	+.04	28.8	+1.4	44	27	33	10	22	24	28	23	74	1.68	-0.6	7	8,685	w.	45	ne.	4	6	4	19	7.2	T.	7.9	
Green Bay	617	109</td																														

TABLE 1.—Climatological data for Weather Bureau stations, February, 1924—Continued

Districts and stations	Elevation of instruments		Pressure		Temperature of the air										Precipitation		Wind		Maximum velocity		Snow, sleet, and ice on ground at end of month									
	Barometer above sea level	Thermometer above ground	Barometer above ground	Station, reduced to mean of 24 hours	Sea level, reduced to mean of 24 hours	Departure from normal	Mean max. + mean min. + 2°	Departure from normal	Maximum	Date	Mean maximum	Mean minimum	Greatest daily range	Mean relative humidity	Total	Departure from normal	Days with 0.01 or more	Miles	Total movement	Precipitation direction	Miles per hour	Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	In.	In.	
	Ft.	Ft.	Ft.	In.	In.	In.	° F.	° F.	° F.	° F.	° F.	° F.	%	%	In.	In.	0.10 5.9													
<i>Northern Slope</i>																														
Billings	3,140	5	27.44	30.16	+ .09	29.4	35.9	+15.8	65	12	48	-16	20	24	48	26	23	79	0.20	4	5,597	sw.	12	14	6	9	4.5	0.0		
Havre	2,605	11	25.89	30.19	+ .09	34.1	31.1	+11.1	63	12	43	-7	20	25	31	29	22	63	0.45	-0.3	5,587	sw.	12	6	13	6.2	4.3	0.0		
Helena	4,110	87	27.04	30.18	+ .10	33.0	+9.7	54	12	40	11	10	26	23	30	27	78	0.51	-1.0	11,2,696	nw.	25	28	6	5	6.8	7.3	0.0		
Kalispell	2,973	48	30.25	30.25	+ .16	30.0	+13.2	57	12	38	3	19	23	34	27	23	78	0.91	+0.3	3,795	nw.	27	8	10	5	14.6	6.7	0.0		
Miles City	2,371	48	27.61	30.24	+ .16	30.0	+7.6	65	1	40	-2	20	29	40	25	20	66	0.96	+0.5	5,837	w.	44	29	9	10	10	5.5	0.0		
Rapid City	3,259	50	28.70	30.24	+ .16	31.6	+4.3	64	14	42	-1	20	21	36	26	20	67	1.14	+0.6	10,336	w.	48	3	6	12	11	5.9	14.3	T.	
Cheyenne	6,088	84	24.03	30.17	+ .14	31.6	+3.3	49	28	38	-2	20	16	33	21	15	68	0.21	-0.5	2,304	sw.	36	28	10	12	7	5.1	2.1		
Lander	5,372	60	24.73	30.27	+ .19	28.1	-	54	13	39	-3	20	17	42	25	21	77	1.09	-0.9	3,503	nw.	42	31	s	1	7	14	8	5.7	7.0
Sheridan	3,790	10	26.20	30.24	+ .17	26.2	+6.6	61	14	36	-4	20	16	34	23	18	71	0.77	-1.1	4,979	s.	42	3	15	2	12	4.8	2.7		
Yellowstone Park	6,200	11	28.96	30.27	+ .15	32.4	+5.8	68	2	44	-1	5	21	40	26	21	71	0.36	-0.1	5,502	n.	42	3	15	1	7	14	8	5.7	7.0
North Platte	2,821	11	27.19	30.22	+ .15	32.4	+5.8	68	2	44	-1	5	21	40	26	21	71	0.36	-0.1	5,502	n.	42	3	15	1	7	14	8	5.7	7.0
<i>Middle Slope</i>																														
Denver	5,292	106	113	24.78	30.16	+ .15	37.6	+4.9	71	14	48	6	21	27	43	30	22	60	0.27	-0.2	3,843	s.	48	3	13	11	5	4.3	4.6	0.0
Pueblo	4,685	80	25.34	30.12	+ .12	38.8	+5.9	76	14	53	13	5	25	46	30	21	55	0.12	-0.4	4,586	w.	52	2	12	13	4	4.4	1.2	0.0	
Concordia	1,392	50	28.64	30.17	+ .08	34.2	+4.4	68	2	44	4	6	24	36	28	22	68	0.26	-0.5	6,372	nw.	32	4	12	6	11	5.1	1.0	0.0	
Dodge City	2,509	11	51	27.52	30.20	+ .14	35.9	+2.7	77	14	48	21	24	39	30	24	74	0.71	0.0	6,109	nw.	47	4	17	2	10	8.7	0.0		
Wichita	1,358	139	28.67	30.14	+ .06	37.4	+3.0	73	2	47	8	6	28	32	25	67	0.58	-0.5	9,306	n.	42	4	11	10	8	4.8	1.0	0.0		
Broken Arrow	765	11	52	29.29	30.14	+ .08	30.8	-	73	14	49	10	6	31	34	-	15	-	0	9,143	n.	48	4	10	9	13	6.0	3.0	0.0	
Muskogee	652	7	41.8	-	-	-	-	-	77	14	50	12	5	31	33	34	27	63	0.54	-0.5	7,174	n.	40	4	11	4	14	5.8	0.7	0.0
Oklahoma City	1,214	10	47	28.85	30.17	+ .10	40.7	+1.1	76	14	50	12	5	31	33	34	27	63	0.54	-0.5	4,508	n.	44	3	17	7	5	3.7	5.0	0.0
<i>Southern Slope</i>																														
Abilene	1,738	10	52	28.31	30.16	+ .11	45.5	+0.7	79	2	50	23	3	35	38	30	61	1.51	+0.4	6,569	n.	46	3	8	7	14	6.3	5.0	0.0	
Amarillo	3,676	10	49	26.36	30.17	+ .15	40.6	+3.4	74	13	52	21	2	29	40	34	29	73	0.36	-0.4	7,298	n.	46	3	16	7	6	4.4	2.7	0.0
Del Rio	944	64	71	29.12	30.13	+ .13	53.4	-2.6	80	3	54	19	27	43	36	31	50	1.45	+0.5	6,236	se.	44	3	10	2	11	4.7	3.2	0.0	
Roswell	3,566	75	85	26.44	30.11	+ .13	43.2	+0.7	76	2	58	18	2	29	48	34	21	50	0.76	+0.2	5,308	s.	44	3	17	7	5	3.7	5.0	0.0
<i>Southern Plateau</i>																														
El Paso	3,762	110	133	26.25	30.06	+ .11	48.7	+3.9	80	7	62	26	1	36	37	34	22	41	0.13	-0.3	6,374	nw.	40	24	21	5	3	2.6	T.	0.0
Santa Fe	7,013	38	53	23.30	30.09	+ .11	48.9	+2.3	60	13	47	13	4	24	36	28	18	53	0.24	-0.6	4,882	n.	30	3	15	9	5	3.6	1.8	0.0
Flagstaff	6,907	10	50	23.39	30.05	+ .14	36.9	+6.1	65	19	51	14	4	22	32	38	29	58	0.08	-0.2	5,238	w.	56	24	23	6	6	0.0	0.0	0.0
Phoenix	1,108	11	81	28.88	30.05	+ .06	58.8	+3.7	82	13	75	32	4	43	39	30	38	71	-0.7	0	3,377	e.	21	21	13	23	6	0.0	0.0	0.0
Yuma	141	9	54	29.90	30.05	+ .05	61.7	+3.1	85	19	78	40	2	46	42	37	23	33	0.00	-0.2	3,941	n.	30	24	26	3	0	0.8	0.0	0.0
Independence	3,957	5	25	26.11	30.18	+ .12	50.4	+8.2	75	13	68	27	1	35	45	37	29	62	0.03	-0.8	1,563	nw.	46	23	23	20	8	1	2.0	0.0
<i>Middle Plateau</i>																														
Reno	4,532	74	81	25.60	30.20	+ .12	43.5	+7.9	70	13	58	22	2	29	42	36	26	55	0.52	-0.8	4,274	w.	39	3	11	10	8	4.8	0.1	0.0
Tonopah	6,060	12	20	30.20	+ .12	41.6	-	64	13	50	22	3	33	26	32	19	43	0.12	-1.1	1,121	w.	34	1	8	10	11	5.8	0.2	0.0	
Winnebucca	4,344	18	56	25.77	30.23	+ .14	39.9	+6.4	65	14	53	18	1	27	37	34	26	65	0.57	-0.4	7,909	sw.	34	1	8	10	11	5.8	0.2	0.0
Modena	5,479	10	43	24.72	30.15	+ .11	37.3	+6.3	63	20	53	14	12	22	44	29	16	48	0.09	-1.2	6,355	w.	38	21	17	8	4	3.4	0.2	0.0
Salt Lake City	4,360	163	203	25.76	30.22	+ .14	39.2	+5.4	60	15	47	23	1	32	24	34	28	69	0.78	-0.7	5,618	nw.	28	21	10	11	8	11	6.6	0.0
Grand Junction	4,602	60	68	25.51	30.16	+ .12	38.3	+5.4	60	13	50	18	1	27	32	31	23	62	0.09	-0.6	3,033	se.	22	2	10	11	8	4.4	T.	0.0
<i>Northern Plateau</i>																														
Baker	3,471	48	53	26.00	30.25	+ .13	37.4	+9.5	52	14	45	21	10	30	23	34	29	72	1.25	-0.1	14,3683	se.	19	11	12	13	6	6.7	1.4	0.0
Boise	2,739	78	86	27.34	30.25	+ .13	42.0	+7.2	61	11	51	29	10	33	29	37	30	64	1.13	-0.3	15,349	se.	31	1	9	11	5	6.4	T.	0.0
Lewiston	757	40	48	29.39	30.21	+ .10	46.0	+8.0	65	12	54	21	10	36	27	34	61	48	0.69	-0.4	24,669	e.	24	3	17	7	7	7.5	0.0	0.0
Pocatello	4,477	60	68	25.61	30.23	+ .13	38.5	+7.6	77	14	44	18	3	29	29	32	26	70	0.24	-0.6	6,026									

TABLE II.—Data furnished by the Canadian Meteorological Service, February, 1924

Stations	Altitude above mean sea level, Jan. 1, 1919	Pressure			Temperature of the air						Precipitation		
		Station reduced to mean of 24 hours	Sea level reduced to mean of 24 hours	Departure from normal	Mean max. + mean min. + 2	Departure from normal	Mean maximum	Mean minimum	Highest	Lowest	Total	Departure from normal	Total snowfall
Feet	In.	In.	In.	°F.	°F.	°F.	°F.	°F.	°F.	In.	In.	In.	
St. Johns, N. F.	125												
Sydney, C. B. I.	48	29.83	29.88	-0.04	16.2	-3.1	25.9	6.6	40	-10	5.53	+1.44	37.5
Halifax, N. S.	88	29.81	29.92	-0.03	20.5	-1.9	29.0	11.9	45	-1	1.81	-3.35	14.7
Yarmouth, N. S.	65	29.83	29.91	-0.08	23.6	-2.2	29.7	17.5	40	10	1.87	-2.87	17.0
Charlottetown, P. E. I.	38	29.86	29.90	-0.05	14.7	-2.0	22.1	7.4	40	-8	2.15	-0.91	21.5
Chatham, N. B.	28	29.84	29.88	-0.08	9.5	-3.0	21.8	-2.7	41	-22	1.24	-1.92	12.4
Father Point, Que.	20	29.98	30.01	+0.03	5.0	-6.5	12.9	-2.9	29	-18	1.56	-0.65	15.6
Quebec, Que.	296	29.73	30.07	+0.08	8.3	-3.5	15.6	1.0	34	-8	2.59	-0.68	25.9
Montreal, Que.	187	29.86	30.09	+0.07	11.4	-3.1	17.8	4.9	34	-5	2.64	-0.43	26.4
Stonecliffe, Ont.	489												
Ottawa, Ont.	236	29.84	30.13	+1.11	11.4	-0.3	22.3	0.5	36	-11	2.57	-0.12	25.7
Kingston, Ont.	265	29.77	30.11	+0.07	14.5	-3.3	22.2	6.9	32	-8	1.05	-1.49	10.5
Toronto, Ont.	379	29.88	30.11	+0.07	20.1	-1.3	27.6	12.9	39	-2	3.26	+0.65	32.3
Cochrane, Ont.	930				3.0		12.4	-6.4	39	-25	0.70		7.0
White River, Ont.	1,244	28.78	30.18	+1.16	3.1	+2.9	17.8	-11.5	38	-41	1.08	-0.44	10.8
Port Stanley, Ont.	592	29.45	30.12	+0.06	20.6	-2.2	28.9	12.4	39	-10	2.17	-1.04	16.8
Southampton, Ont.	656	29.35			16.5	-3.4	24.7	8.3	34	-8	2.09	-0.81	20.9
Parry Sound, Ont.	688	29.38	30.13	+1.12	10.7	-3.6	20.9	0.5	33	-17	3.01	+0.09	30.1
Port Arthur, Ont.	644	29.48	30.23	+0.18	13.2	+6.8	21.8	4.6	42	-15	0.28	-0.62	2.8
Winnipeg, Man.	760												
Minnedosa, Man.	1,690	28.32	30.24	+1.15	10.7	+13.4	21.1	0.3	41	-27	0.44	-0.17	4.4
Le Pas, Man.	880				8.4		19.2	-2.3	43	-35	0.27		2.7
Qu'Appelle, Sask.	2,115	27.81	30.15	+0.07	18.6	+19.2	27.5	9.8	49	-12	0.76	+0.03	7.4
Medicine Hat, Alb.	2,144												
Moose Jaw, Sask.	1,759				21.1		29.5	12.8	55	-20	0.82		7.8
Swift Current, Sask.	2,392	27.47	30.19	+1.12	24.5	+16.5	33.9	15.2	57	-22	0.51	-0.23	5.1
Calgary, Alb.	3,428												
Banff, Alb.	4,521												
Edmonton, Alb.	2,150												
Prince Albert, Sask.	1,450	28.56	30.22	+1.13	14.0	+17.0	25.2	2.7	47	-26	0.30	-0.39	3.0
Battleford, Sask.	1,592	28.34	30.16	+0.07	16.6	+16.5	27.3	6.0	48	-26	0.66	+0.29	6.6
Kamloops, B. C.	1,262												
Victoria, B. C.	230	29.86	30.12	+1.12	45.1	+5.6	49.4	40.9	53	35	5.29	+1.19	0.0
Barkererville, B. C.	4,180												

## LATE REPORTS, JANUARY, 1924

Point Stanley, Ont.	592	29.50	30.17	+1.10	21.0	+1.2	28.4	13.6	44	-11	4.15	+1.16	15.8
Winnipeg, Man.	760	29.24	30.14	+0.08	-3.5	+3.3	4.8	-11.9	38	-31	0.42	-0.46	4.2
Qu'Appelle, Sask.	2,115	27.70	30.11	+0.03	-1.1	+2.7	8.8	-11.0	41	-34	0.76	+0.26	7.6
Swift Current, Sask.	2,392	27.42	30.20	+1.11	5.7	+2.6	15.2	-3.9	48	-36	0.42	-0.22	3.2
Prince Albert, Sask.	1,450	28.48	30.17	+0.08	-4.0	+4.4	5.6	-13.7	39	-36	0.58	-0.38	5.9
Battleford, Sask.	1,592	28.28	30.15	+0.07	-0.5	+5.4	9.7	-10.7	47	-40	0.42	+0.02	4.2

## SEISMOLOGICAL REPORTS FOR FEBRUARY, 1924

W. J. HUMPHREYS, Professor in Charge

[Weather Bureau, Washington, April 3, 1924]

TABLE 1.—Noninstrumental earthquake reports, February, 1924

Day	Approximate time, Greenwich civil	Station	Approximate latitude	Approximate longitude	Intensity Rossi-Forel	Number of shocks	Duration	Sounds	Remarks	Observer
1924 Mch 9 11 40	CALIFORNIA Santa Clara.....	37 15	121 55	1			Ser. 240	None.....	Felt by one.....	
13 9 10	Calexico.....	32 41	115 30	2	2	2			Felt by several.....	University of Santa Clara. F. C. Cihak.
14 16 06	SUMMERTIME Summerville.....	33 05	80 15		2			Loud.....	Felt by many.....	E. G. Robertson.
10 14 05	WASHINGTON Seattle.....	47 38	122 20	2	2	10	None.....	do.....		Mrs. M. B. Summers.